

Abstract

This invention relates to a catalyst system comprising an activator and one or more heteroatom substituted phenoxide group 4 to 10 transition metal or lanthanide metal compounds wherein the metal is bound to the oxygen of the phenoxide group and provided that:

a) if more than one heteroatom substituted phenoxide is present it is not bridged to the other heteroatom substituted phenoxide,

b) if the metal is a group 4 metal, the heteroatom substituted phenoxide does not contain pyridine,

c) if the metal is a group 4 metal then the carbon adjacent to the carbon bound to the oxygen of the phenoxide may not be bound to an aldehyde or an ester, and

d) if the metal is nickel then the carbon adjacent to the carbon bound to the oxygen of the phenoxide may not be bound to an imine.

The activator may be an aluminum alkyl, an alumoxane, a modified alumoxane, a non-coordinating anion, a borane or a mixture thereof.